- Changes to ground and surface water distribution. Project-related activities which change ground or surface water distribution may inundate or dry wetlands leading to conversion of wetlands to water or upland.
- Changes to wetland vegetation cover and soils. Project-related activities that generate fugitive dust may result in deposition within wetlands which would alter wetland vegetation cover and reduce wetland functions. Project-related activities that increase erosion or sedimentation may alter wetland vegetation cover and reduce wetland functions.

Table 3.11-11: Impact Methodology for Effects on Wetlands

Impact Factor	Assessment Criteria		
Magnitude or Intensity	Impacts to <5% by acreage of high-value wetlands or greater proportions of low value wetlands in the study area[1].	Impacts to 5 to 25% by acreage of high-value wetlands in the study area[1].	Impacts to >25% by acreage of high-value or in the study area[1].
Duration	Wetland functions may be reduced during construction but would be expected to return to near pre-activity level within several growing seasons after reclamation.	Wetland functions would be reduced during construction but would be expected to return to near pre-activity functions after the action ceased within several decades after reclamation.	Wetland functions would be eliminated and would not be anticipated to return to previous functions after the action that caused the impacts ceased; or within more than several decades after reclamation.
Extent or Scope	Affects wetland systems within one or a few watersheds[2].	Affects wetland systems across multiple watersheds[2].	Affects extensive wetland systems across many watersheds[2].
Context	Affects wetlands that are widespread and typical of the region.	Affects wetlands that support important local or regional subsistence resources.	Affects wetlands that are rare or of very high quality.

Notes:
1 Proportions are based on percentages used in the Point Thomson EIS (Section 5.8; Table 5.8-1; Corps 2012).The wetland study areas defined in Section 3.11.3 are assumed to be generally representative of affected watersheds and the surrounding area.
2 Watersheds are defined as the National Hydrography Database Hydrologic Unit Code (HUC) 10-digit watershed boundary data (HUC 10 WBD).

3.11.4.1 ALTERNATIVE 1 – NO ACTION

Under the No Action alternative the Donlin Gold Project would not be constructed, therefore it would not have any effects on wetlands.

3.11.4.2 ALTERNATIVE 2 – DONLIN GOLD'S PROPOSED ACTION

Potential wetland impacts specific to the Mine Site, Transportation Corridor, and Pipeline are described in the following sections.

Based on comments on the Draft EIS from agencies and the public, one route option has been included in Alternative 2 to address concerns due to pipeline crossings of the Iditarod National Historic Trail (INHT):

- The MP 84.8 to 112 North Option would realign this segment of the natural gas pipeline crossing to the north of the INHT before the Happy River crossing and remain on the north side of the Happy River Valley before rejoining the alignment near MP-112 where it enters the Three Mile Valley. The North Option alignment would be 26.5 miles in length, compared to the 27.2 mile length of the mainline Alternative 2 alignment it would replace, with one crossing of the INHT and only 0.1 mile that would be physically located in the INHT right-of-way (ROW). The average separation distance from the INHT would be 1 mile.

3.11.4.2.1 MINE SITE

Construction and Operations Phases

Primary direct and indirect construction-related effects on wetlands would include:

- Clearing and removal of wetland vegetation;
- Placement of fill in wetlands;
- Excavation that eliminates wetlands;
- Compaction, rutting, and mixing of wetland soils; and
- Disruption of wetland hydrology through:
  - Blocking surface water flow and creating impoundments that flood wetlands;
  - Blocking or diverting surface water flow and drying wetlands;
  - Breaching impervious substrates causing drainage of perched water tables and drying wetlands;
  - Degrading permafrost causing drainage and drying wetlands;
  - Degrading permafrost causing subsidence that converts wetlands to waters; and
  - Removing, blocking, or diverting subsurface water causing drying of wetlands.

Most project-related direct and indirect effects on wetlands would be initiated during the Construction Phase and may result in temporary or permanent loss of wetlands or alteration in wetland functions. Operations-related direct and indirect effects on wetlands would include:

- Degradation of wetland vegetation and soils due to:
  - Fugitive dust and gravel thrown from pads or roads by vehicles or snow clearing;
  - Introduction and spread of nonnative invasive species (NNIS);
  - Riparian wetland erosion from unstable slopes or water diversions,
  - Sediment deposition from slope erosion; and
  - Chemical and fuel spills and leaks.
- Alteration of surface water quantity or distribution due to:
  - Creation of freshwater impoundments;